

Laucks

Testing Laboratories, Inc.

940 South Harney St., Seattle, Washington 98108 (206) 767-5060 FAX 767-5063



Certificate

Chemistry, Microbiology, and Technical Services

CLIENT: Alaskan Copper Works
P.O. Box 3546
Seattle, WA 98124
ATTN: Jim Brown

LABORATORY NO. 10158

DATE: June 10, 1988

PO# M6104

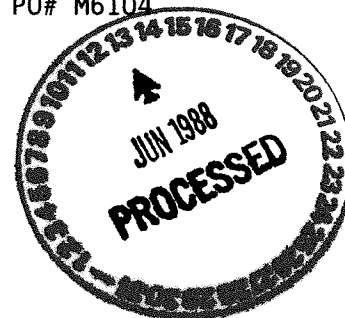


REPORT ON: WASTE DISCHARGE

SAMPLE

IDENTIFICATION: Submitted 06/01/88 and identified as shown below:

- 1) ID# 5-3-3200-M6104
- 2) ID# 5-5-3200-M6104
- 3) ID# 5-10-3200-M6104
- 4) ID# 5-17-3200-M6104
- 5) ID# 5-12-3200-M6104
- 6) ID# 5-19-3200-M6104
- 7) ID# 5-24-3200-M6104
- 8) ID# 5-26-3200-M6104



TESTS PERFORMED AND RESULTS:

parts per million (mg/L)

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Zinc	0.062	0.092	0.080	0.086	0.13
Chromium	0.40	0.64	0.64	0.67	0.78
Copper	0.34	0.47	0.25	0.56	0.50
Nickel	0.46	0.49	0.40	0.52	0.52

	<u>6</u>	<u>7</u>	<u>8</u>	<u>Method Blank</u>
Zinc	0.35	0.11	0.089	<0.002
Chromium	5.7	0.48	0.47	<0.005
Copper	1.3	0.35	0.46	<0.002
Nickel	2.6	0.37	0.32	<0.01



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AKC-0015555

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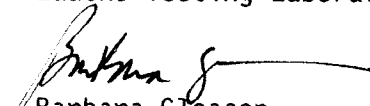
LABORATORY NO. 10158

Key

< indicates "less than"

Respectfully submitted,

Laucks Testing Laboratories, Inc.



Barbara Gleason

BG:emt



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APPENDIX

Matrix Spike/Matrix Spike Duplicate Report

Inorganics/Metals Analyses

Sample	Analyte	parts per million (mg/L)			mg/L			QC Limits		
		Spike Added	Sample Result	MS Result	% Rec	MSD Result	% Rec	RPD	RPD	REC
1	Chromium	0.100	0.40	0.46	60.	0.48	80.	29.	Comment A	
1	Zinc	0.100	0.062	0.15	83.	0.15	88.	6.	6	64-127
1	Copper	0.100	0.34	0.38	42.	0.39	45.	6.	Comment A	
1	Nickel	0.200	0.46	0.59	68.	0.60	72.	6.	5	66-125

MS = Matrix Spike

MSD = Matrix Spike Duplicate

Rec = Recovery

RPD = Relative Percent Difference

Comment A. Samples are spiked prior to preparation and analysis at a level deemed to be generally appropriate to the average sample processed in the laboratory. In this case, the level of analyte already present in the sample was large enough to make an accurate determination of spike recovery impossible.



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